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Book reviews and notices

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Introduction

Lichens, the genus *Amanita*, stereoid fungi, rust fungi, and a checklist for the fungi in Japan are the focus for the book reviews presented here, just an average anthology of today's systematic literature. The need to inventory, classify and describe is as great as ever, or even more pressing in light of the changes in the environment that take place, and the books reviewed here fill, in their own small ways, the existing knowledge hole.

This contribution concludes with a list of newly published books to be included in upcoming Book reviews and notices.

Ascomycetes

***Hypotrachyna* (*Parmeliaceae*, lichenized fungi).** By H.J. Sipman, J.A. Elix & T.H Nash III. 2009. New York Botanical Garden Press, Bronx, New York, NY 10458-5126, USA; <www.nybgpress.org>. Pp. 179, figs 83, tables 2. [Flora Neotropica Monograph 104] ISBN 978-0-89327-502-0. Price: US $ 48.

Works such as this form the backbone of biodiversity inventory and conservation work. They are of particular importance where they are the culmination of extensive study and field experience and deal with groups for which there was previously no contemporary synthetic works in the region concerned. The tropical American species of this genus of parmelioid lichens had previously been studied by Hale (1975), who accepted 74 species. However, from the work of Sipman and a growing band of lichenologists in the region, it had become clear that there were numerous additional species to be

* Books for consideration for coverage in this column should be mailed to the Book Review Editor at the address above. All unsigned entries are by the Book Review Editor.

accommodated. This new monograph almost doubles the number of known species to 140, of which 37 are new to science, at the same time relegating many names to synonymy. *Hypotrachyna* is primarily a tropical genus, although a few species are known in temperate regions where they tend to occur in somewhat high-rainfall regions. The neotropics in particular are their centre of diversity, and 85 of the species treated here are only known from that region.

The monograph follows the traditional pattern of an historical overview, a discussion of morphological and anatomical characters, a rather full account of the 109 lichen products detected, notes on ecology and biogeography, and a key. The species are arranged alphabetically with full bibliographical and type citations (almost all types having been studied by at least one of the authors) for accepted names and synonyms, descriptions, references to illustrations, details of chemical characters, a summary of the distribution, details of specimens or selected specimens examined, and notes concentrating on separation from other species. Distribution maps are provided in many cases, but the halftone photographs are mainly of the types of newly described species or lectotypes. Photographs of more species, especially if they could have been in colour, would have been a valuable addition to facilitate the use of the monograph by non-specialists who lack immediate access to the works containing the listed illustrations. I was pleased to see that the Latin diagnoses were generally restricted to 2–3 lines but sad that data on the new names had not been deposited in MycoBank, and consequently reference numbers not included. For me, and I suspect many potential users, the key, in addition to being presented in the space-wasting indented and dated format used in other volumes of the series, places too much emphasis on chemical characters. Is it reasonable to expect users to have a UV-lamp and potassium hydroxide to hand to get beyond the second couplet? There is still perhaps too much emphasis on chemical products in the formulation of species concepts here, and I was disappointed to see the "fertile species"/"asexual counterparts" concept perpetuated — in all such supposed cases in macrolichens so far studied in detail by molecular methods the relationships have proved to be unsound (Crespo & Pérez-Ortega 2009). Following Hale, conidial characters are not considered taxonomically valuable and seem not to have been studied in most species, but I was pleased to see ascospore size differences featured in a few of the species separations — as with conidia, ascospore characters are much-neglected in macrolichen systematics.

No molecular studies were undertaken in the course of this revision, and it would have been of interest to know to what extent the more widely distributed species, such as *Hypotrachyna revoluta*, are really intercontinental as opposed to further instances of cryptic speciation as is proven frequent in other "widespread" parmelioid lichens (Crespo & Lumbsch 2010). I suspect

modifications of species concepts may become necessary in the future in some cases, but that will be a task for the next generation of researchers who can proceed from the base now created. Overall, however, this is a scholarly landmark work on the genus, and one that has been painstakingly compiled over many years by three of today's most experienced lichenologists. It can be unhesitatingly commended as an authoritative account of the current state of knowledge of this important lichenized genus.

Crespo A, Lumbsch HT. 2010. Cryptic species in lichen-forming fungi. IMA Fungus 1: 167–170.

Crespo A, Pérez-Ortega S. 2009. Cryptic species and species pairs in lichens: a discussion on the relationship between molecular phylogenies and morphological characters. Anales del Jardin Botánico de Madrid 66 (S1): 71–81.

Hale ME. 1975. A revision of the lichen genus *Hypotrachyna* (*Parmeliaceae*) in tropical America. Smithsonian Contributions to Botany 25: 1–73.

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The lichen genus *Rinodina* (Ach.) Gray (*Lecanoromycetidae*, *Physciaceae*) in North America, north of Mexico. By J.W. Sheard. 2010. National Research Council of Canada, Ottawa, Ontario ON K1A 0R6, Canada <pubs@nrcresearchpress.com>. Pp. viii + 246, figs 182, tables 6. [Monograph Publishing Program.] ISBN 978-0-660-19941-2. Price: US $ 89.95.

John Sheard has made the genus *Rinodina* the primary focus of his systematic research since he completed his PhD on the British and European species in 1966; after he moved to the University of Saskatchewan in 1968 his attention was immediately drawn to the North American species — on which he proceeded to make contributions from time to time while accumulating information for this work. Early retirement and appointment as an Emeritus Professor of the University in 2000 has enabled him to bring this major work to fruition. Since the work of Malme in 1902, ascospore structural differences have become the fundamental criterion in the classification of the genus. The two developmental ascospore types (*Dirinaria*-type, *Physcia*-type) yield no fewer than 13(-14) spore types amongst the North American species. Various molecular studies during the last decade have shown that the genus is paraphyletic (e.g. Kaschik 2006) with foliose genera of the *Physciaceae* (e.g. *Anaptychia*, *Physcia*, *Physconia*) nested within it. While not addressing this issue, Sheard does reflect on the ancient origins of different groups within the genus in relation to continental movements, suggesting that a calcicolous group well represented in Colorado could date back to the Middle Triassic (240-230 Myr). Several other

biogeographical hypotheses are also put forward for future testing, among them molecular, and there are detailed discussions of regional diversity and "floristic" elements that can be recognized within North America.

The introductory chapters include information on the 61 characters assessed for each specimen studied in detail and recorded in a spreadsheet — a method rarely used these days but routine during numerical (phenetic) analyses in the 1960s and 1970s. Especially important is the discussion of spore types, and the illustrations make clear how important it is to observe developing as well as mature (but not over-mature) ascospores when considering to which category they should be assigned; here clearing in Melzer's reagent is recommended for material less than 2-3 years old. The numerous half-tone photographs in this section and in the species accounts make these characters much clearer than line drawings alone, as used in some other regional accounts of the genus. The chemical products detected are summarized, but these are much less diverse than in many other lichenized genera. The key is strictly dichotomous, but in three categories arranged by substratum. In general this will work well, but as Sheard notes substrate-switches can occur so some caution in their use would be prudent. Spore types unavoidably feature strongly in the keys. Otherwise the characters seem clear, although I would have preferred to see maximal and minimal spore lengths rather than averages used in several couplets.

Species treatments are particularly detailed, especially with respect to descriptions of anatomical features, and there are the expected notes on ecology, distribution, and characterization. Lists of specimens examined and also in many cases distribution maps are provided, the latter with records split into pre- and post-1960 categories. In all, 96 species are recognized in North America, of which five are newly described and ten had not previously been reported. Of these, 36 are evidently endemic. At the same time, no fewer than 30 species, including 13 first described from North America, are placed into synonymy. In all cases detailed bibliographic and typification details are presented. Notes are provided on some excluded species, including the lichenicolous "*Rinodina*" *insularis,* which has *Bacidia*-type (not *Lecanora*-type) asci and which Sheard considers to be best treated as "an aberrant *Buellia*" for the present. In fact, this species has now been included in *Endohyalina* by Giralt et al. (2010), a work which evidently came out while Sheard's monograph was in press.

This meticulously produced monograph is a great tribute to Sheard's almost lifelong dedication to the genus and to his powers of critical observation. It should be looked at by others contemplating monographs of crustose lichens as a standard to aspire to. This revision is sure to remain the pivotal work on species concepts in the genus for many years to come, even if the genus itself is eventually divided as a consequence of more intensive molecular work and a re-examination of generic concepts in the family. The work also has value as a

complement to the several regional revisions of the genus produced in recent decades (e.g. Mayrhofer & Poelt 1979, Mayrhofer 1984, Giralt 2001, Mayrhofer & Moberg 2002, Kaschik 2006) and so merits use worldwide to. This is a job extremely well done in the best taxonomic tradition!

Giralt M. 2001. The lichen genera *Rinodina* and *Rinodinella* (lichenized ascomycetes, *Physciaceae*) in the Iberian Peninsula. Bibliotheca Lichenologica 79: 1–160.

Giralt M, van den Boom PPG, Elix JA. 2010. *Endohyalina*, the genus in the *Physciaceae* to accommodate the species of the *Rinodina ericina*-group. Mycological Progress 9: 37–48.

Kaschik M. 2006. Taxonomic studies on saxicolous species of the genus *Rinodina* (lichenized ascomycetes, *Physciaceae*) in the Southern Hemisphere with emphasis in Australia and New Zealand. Bibliotheca Lichenologica 93: 1–162.

Mayrhofer H. 1984. Die saxicolen Arten der Flechtengattung *Rinodina* und *Rinodinella* in der alten Welt. Journal of the Hattori Botanical Laboratory 55: 327-493.

Mayrhofer H, Moberg R. 2002. *Rinodina*. Nordic Lichen Flora 2: 41–69.

Mayrhofer H, Poelt J. 1979. Die saxicolen Arten der Flechtengattung *Rinodina* in Europa. Bibliotheca Lichenologica 12: 1–186.

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Basidiomycetes

Quelques espèces nouvelles ou mal délimitées d'*Amanita* de la sous-section *Vaginatinae*. 1° complément à *Amaniteae*, Fungi Europaei 9. By P. Neville † & S. Poumarat. 2009. Fungi non delineati LI-LII. Edizioni Candusso, Via Ottone Primo 90, 17021 Alassio SV, Italy. <maxcandusso@libero.it>. Price € 26.00.

During the final illness of the late Professor Pierre Neville and after his death, several friends and associates generously expended time and effort in the production of this book. It represents their personal tribute to him, his life, and his work. It also comprises the extant fragments of the work of Neville and Poumarat on *Amanita* subsection *Vaginatinae*, which I understand to be section *Vaginatae* in the sense of Corner and Bas (1962) as revised by Yang (1997). A publication covering European taxa of *Amanita* [section *Amanita*] subsection *Amanitella* and subsection *Vaginatinae* was proposed to follow the extensive volume on the *Amanitaceae* [p.p.] of Europe written by Neville and Poumarat (2004; reviewed in Mycotaxon 92: 474-484). Understandably, the present volume has a much more restricted scope. It is significant that "Europe" is not mentioned in the title of the present work. The materials on which the reported results are based are almost exclusively from France, Italy, and Spain. I found one collection each from Finland and Switzerland listed as revised material.

For a book discussing taxa that first appeared in the works of Schaeffer and Secretan, it is a shortcoming that no German, not to say Bavarian, material was revised and that only one specimen from Switzerland was studied. As was the case with the 2004 volume, the conspicuous lack of material from northern and eastern Europe may raise questions about the accuracy of some species concepts employed in this work as well as for some claims of novelty.

This work is divided into three parts of which the first two ("Introduction" and "Matériel et méthodes") are quite brief and refer the reader to the 2004 volume. The remainder of the work is dedicated to "Présentation des espèces," which is divided into four parts: (A.) "*Amanita pini*" (a slight modification of the protolog of this taxon), (B.) "Espèces nouvelles," (C.) "Quelques *Vaginatinae* déja décrites, liées a un hôte précis," and (D.) "Les Amanites cocardées européennes." There are 26 line drawings of anatomical elements, and thirty-six photographic plates in color were included at the end of the book. Overly dark photographs and photographs that are off color were not adjusted prior to publication. The book lacks an index, but does list the taxa that are treated at greatest length in the table of contents. The authors do not follow conventions for presenting their lists of material examined in a manner organized by countries and by administrative subdivisions of those countries; as a consequence, their information on material examined is very difficult to read. The present work contains nine new names and one new combination in *Amanita*. Six previously named taxa are treated with some detail. Three names have lectotypes designated, and one name has a neotype designated. The new taxa are proposed to be added to the 50 or so that the authors estimate have been previously treated in Europe, based on certain keys authored by M. Contu. These keys contain a significant number of infraspecific taxa and several synonyms; hence, the species count in them is closer to 30.

The new species proposed herein (each listed with the country or countries from which material examined was collected) are *A. betulae* (France), *A. coryli* (France and Spain), *A. fulvoides* (France, Italy, and Spain), *A. schaefferi* (a single locality in France), and *A. subfuliginosa* (a single Italian locality). *Amanita avellanea* is the new combination at species rank. The authors' *A. ochraceomaculata* (which is extremely close to, if not identical with, *A. fulva* as it is widely understood in northern Europe) is presented again without comparison to any truly similar taxa. Among other previously described taxa treated in part C are *A. pachyvolvata* and *A. simulans*. *Amanita umbrinolutea* and *A. battarrae* are treated in part D.

The authors unfortunately follow the approach of the 2004 volume and abandon both the use of logic and the treatment of complex and informative morphological characters such as the detailed anatomy of the lamellae. In fact, I was unable to find a species treatment in the book that mentions bilateral

divergent lamella trama. Demonstrations of novelty are inadequate and consider only European taxa that bear some macroscopic similarity with a given proposed taxon. The authors take little advantage of, and make little comparison to, extant expert literature. In one case, a modern revision of a taxon that they treat at length (*A. umbrinolutea*) is included in their bibliography but cited briefly with regard to a nomenclatural point and is ignored entirely with regard to its taxonomic content — even though the authors' description differs significantly from that of the prior work. When a prior work treats more characters than do the authors, the authors select from the prior work only the information that may be placed in one-to-one comparison with components of their own description and omit mention of the rest. From the work of Bas in section *Vaginatae* they cite only his paper on species concepts (Bas 1977). Sixteen years of relevant publications by Yang and his co-authors are ignored entirely. In some critical cases, the authors make unjustified assumptions about the meaning of the work of other amanitologists such as those just cited. For example, the authors assume that because they have noted that the cells of the subhymenium in many species of *Amanita* inflate to one degree or another as the hymenium matures, that the researchers who describe the subhymenium and characters of the subhymenium in the development of *Amanita* taxonomy must be unaware of this fact and, hence, have been producing ill-informed, wrong descriptions. As a consequence of the above-cited issues (among other problems) the descriptions in the reviewed work are very difficult, if not impossible, to compare with the descriptions that comprise the main body of morphological study of the *Amanitaceae* over the last half century.

Spore data in this work cannot be understood by other workers [unless they were to have access to the original complete sets of raw spore measurement data] because, despite including the table from (Bas 1969) relating length/breadth ratio (Q) ranges to qualitative terms for spore shape, the authors almost always provide ranges for Q that include values less than 1.0. Hence, their average Q values are meaningless.

Thorough type revisions will be necessary in order to give meaning to every name proposed in this work. All type collections are retained in personal herbaria, as was often the practice in the case of taxa treated in Neville and Poumarat (2004). I have inquired of Prof. Poumarat concerning the location of materials revised for the present work as well as the 2004 volume. He kindly informed me that all the materials of Neville's herbarium have now been transferred to Prof. Poumarat's herbarium, and he is considering where to deposit them in the future. Great effort has been expended on assembling and determining the material in the combined herbaria of Neville and Poumarat; it will be important that the material be well preserved and to know where the exsiccata can be found.

The authors' reasoning in attempting to replace the use of anatomy with supposed single-tree-genus associations in the diagnoses of their species is circular. It only means that someone other than the authors must do the anatomical revision to support the species and create a sufficiently detailed species concept so that hypotheses concerning plant association, for example, can become meaningful.

Poor methodology and lack of anatomical character data lead to difficult situations of which there is a prime example in this book. "Species A" is defined by a limited set of anatomical details and the fact that "species A" is associated with a certain tree genus or genera, let's call the associates collectively "T." It happens that many examples of "species A" have been collected over a number of years around a single specimen belonging to the T group. It is assumed that all the specimens (being macroscopically similar and, apparently, sharing the limited set of microscopic characters used) are all one species. Moreover, it is assumed without justification that all the basidiomes are produced by a single mycelium. One set of the few available anatomical characters (spore size and shape) varies considerably from one collection to another of "species A." A chart is offered showing a distribution of the average length/width ratio (the quantitative rendering of "shape") that is far from a normal distribution and strongly suggests to me the presence of more than one taxon in the set of collections. Because the anatomical information has been intentionally limited in favor of ecological association information and because of the cited unjustified assumptions related to ecological association, the possibility that multiple species may be involved is not considered.

This book is nomenclaturally significant. It also brings to light opinion and information from some southern European publications that are not easily accessible elsewhere. It should be in libraries for the use of those interested in revising the taxa discussed and proposed in it.

Bas C. 1969. Morphology and subdivision of *Amanita* and a monograph of its section *Lepidella*. Persoonia 5: 285–579.

Bas C. 1977 ["1976"]. Species concept in *Amanita* section *Vaginatae in* H. Clémençon (ed). The species concept in *Hymenomycetes*. Bibliotheca Mycologica 61: 79–103.

Corner EJH, Bas C. 1962. The genus *Amanita* in Singapore and Malaya. Persoonia 2: 241–304.

Neville P, Poumarat S. 2004. *Amaniteae*. 1. Fungi Europaei 9. Edizione Candusso.

Yang ZL. 1997. Die *Amanita*-Arten von Südwestchina. Bibliotheca Mycologica 170: i–ii, 1–240.

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Stereoid fungi of America. By L. Ryvarden, 2010. Synopsis Fungorum, P.O.Box 95, Blindern, 0314 Oslo, Norway. <leif.ryvarden@bio.uio.no>. Pp. 202, figs 65. [Synopsis Fungorum vol. 28] Price: NOK 280.

***Stereum* s.l.** By A.L. Welden, 2010. New York Botanical Garden Press, Bronx, New York, NY 10458-5126, USA; <www.nybgpress.org>. Pp. 79, figs. [Flora Neotropica Monograph 106] ISBN 0893275042. Price: $ 38.00.

In the previous installment of this journal's Bookreviews (Mycotaxon 114: 490), David Hawksworth, in noting the paucity of identification keys in a recent collection of systematic revisions of *Dothideomycetes*, stated: "Mycologists with access to superbly equipped and resourced molecular laboratories, supported by skilled technicians, should not forget that they represent a privileged section of the potential user-community of systematic works." If strictly phylogenetic studies lacking morphological information (noting that not all of the chapters in the aforementioned collection fit this description) represent one end of a "utility vs. phylogenetic purity" spectrum, the other must consist of studies that eschew monophyly entirely to facilitate identification of superficially similar taxa. Two recent treatments of stereoid fungi of the Americas inhabit the latter niche.

In thinking of the stereoid fungi (*Stereum* s.l.), one may be reminded of former U.S. Supreme Court Justice Potter Stewart's famous statement about pornography: "I know it when I see it." Beyond this initial recognition, however, the task of identification is considerably more complicated. The characters uniting the stereoid fungi are quite general ones — effused-reflexed or pileate basidiomata with a smooth or nearly smooth hymenophore and hyaline, usually smooth, basidiospores — and further examination reveals a significant amount of anatomical and micromorphological diversity. Given the dearth of accessible sources for identification of stereoid fungi, a central starting point for taxonomic navigation seems justified. The two volumes reviewed here provide such resources, and in so doing take a decidedly non-phylogenetic approach: a total of 37 genera representing 18 families and 6 orders (according to current Index Fungorum taxonomy) are covered.

The volume by Arthur L. Welden (Tulane University, emeritus), the 106th in the *Flora Neotropica* series of monographs, covers 13 stereoid genera having species in the Neotropics. The author provides a detailed methods section (including formulae for all macrochemical reagents employed in the study), a discussion of the phylogenetic affinity of each genus, a synoptic definition of *Stereum* s.l. (the author employs this definition with some skepticism, but it is nonetheless welcome to the reader in defining the limits of the entity to be discussed), a key to genera, keys to Neotropical species of *Coralloderma*, *Stereopsis*, *Cotylidia*, *Hydnopolyporus*, *Cymatoderma*, *Podoscypha*, *Cystostereum*,

Stereum, and *Lopharia* s.l., and descriptions of species. The volume is illustrated by 13 line drawings and 6 distribution maps; the former generally include macroscopic habit as well as micromorphological sketches. The section on phylogenetic affinities includes an extended discussion of *Cymatoderma* and *Podoscypha* (together accounting for just over half of the known Neotropical *Stereum* s.l.), including detailed discussions of major characters and a tabular species-level comparison of character state distributions. Taxonomic novelties presented in this volume include 7 new combinations and one status reassignment. This handsome and carefully prepared volume reflects a very high level of scholarship, clearly drawn from both extensive fieldwork and a thorough knowledge of the literature regarding stereoid fungi.

The volume by Leif Ryvarden (University of Oslo) is intended to be a compilation of available information to aid in the identification of stereoid fungi — especially in the Neotropics — rather than a monographic study, though one new species and 2 new combinations are proposed. Thirty-six genera are included. The larger number of genera compared to the Welden volume is a function of broader geographic and taxonomic coverage (temperate as well as tropical America, and taxa with ornamented and smooth spores, are included); in other cases it is due to differences in delimitation of genera — for example, *Hjortstamia* and *Porostereum* are retained within a more heterogeneous *Lopharia*, *Aleurocystis magnispora* is treated in *Stereum*, and *Cyphellostereum pusiolum* is treated within *Cotylidia* by Welden. The text provides summary information for each genus (original citation, brief descriptive synopsis, type species data, and remarks) and descriptions of each of the treated species, and is accompanied by a key to genera (albeit incomplete; see below), 22 keys to species, and 75 line drawings of micromorphological features and in some cases basidiome habit. Some of the illustrations are provided by the author; others are reprinted from *Corticiaceae of North Europe*. There are several typographic errors, including a misspelling of *Licrostroma* in the table of contents, discrepancy between the number of included genera on the back cover (35) vs. table of contents (36), and reprinted figures that retain internal references to additional figures from the original text. The first printing lacked the second part (Key B) of the key to genera, but this problem was corrected in later printings. Despite a few such errors, this is an excellent volume that compiles an impressive amount of information, and the identification tools and remarks presented here will prove valuable to not only those mycologists working in the Americas but on stereoid fungi in other parts of the world as well.

Both Welden and Ryvarden have opted to present polyphyletic assemblages of taxa in hopes of providing mycologists in tropical America as well as students and non-specialists with a central starting point from which to identify a wide variety of these superficially similar fungi. While this approach

is completely justified given the need for accessible, comprehensive, and up-to-date taxonomic literature, its ability to provide a catalyst for further, detailed scientific study of particular monophyletic subgroups is diminished by the lack of a clear phylogenetic context. Welden's discussion on "The interrelationships of the genera of *Stereum* s.l." bridges this gap to a large degree, but the interested researcher will need to consult a wider variety of sources in order to understand the broader evolutionary picture for these organisms. Assuming that mycologists with access to molecular laboratory facilities also have access to suitable electronic reference materials, and given the greater ability for electronic databases such as Index Fungorum and Mycobank to keep up with rapidly changing systematic classifications compared to print sources, the approach taken by both authors seems to be the right one. Both of the volumes reviewed here will be valuable references for workers with an interest in further sorting out taxonomic issues within the stereoid fungi and/or identifying stereoid fungi in the Americas.

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Ferrugens: Diversidade de *Uredinales* do Parque Nacional do Itatiaia, Brasil. By M. Salazar Yepes & A. Alves de Carvalho Júnior. 2010. Technical Books Eidtora, Rua Gonçalves Dias, 89, 2° andar, Sala 208, Centro Rio de Janeiro RJ CEP 20.050-030, Brazil. <www.tbeditora.com.br>. Pp. 201, figs 36. ISBN: 978-85-61368-18-0. Price: R$ 70.00.

The Parque Nacional do Itatiaia is the oldest national park in Brazil, and part of the Atlantic forest, well known for its high biodiversity. It is in the provinces of Rio de Janeiro and Minas Gerais, and covers the higher altitudes (above 500 m asl). This is the area where the two authors have inventoried the rust fungi. Almost one third of all the species known for Brazil so far (Hennen et al. 2005) is present in the park, 171 species in total. The book starts with short introductions to the park and its vegetation and to rust fungi, followed by the main part with the descriptions of the species organized by host plant, *Pteridophyta* first, then the *Magnoliaphyta* with all their families. Colour photos of infected plants and microscope photos of spores and other important features illustrate the fungi. As expected, the genus *Puccinia* is the most species rich with 81 species (this excludes *Uromyces* with 26 species). The *Asteraceae* are the plant family with the highest number of rust fungi. The book continues with a glossary, a bibliography, an index to the rust species, and per plant species a list of rust taxa. The different chapters are clearly colour coded on the pages, making it very easy to find the different subjects.

This is the first book of this kind that I have ever seen with colour illustrations throughout. It is a well-executed, important contribution to the knowledge of those fascinating plant pathogenic fungi. I would have loved to see more, and bigger pictures of the infected plants, and family names as page headers, but these are just two minor comments. Even though it is written in Portuguese, the text and descriptions are quite accessible and understandable. All in all a very nice, well-executed contribution to our knowledge of an important fungal group.

Hennen JF, Figueiredo MB, de Carvalho AA Jr, Hennen PG, 2005. Catalogue of the species of plant rust fungi (*Uredinales*) of Brazil. 490 pp. <www.jbrj.gov.br/>

Checklist

List of fungi recorded in Japan. By Ken Katumoto. 2010. The Kanto Branch of the Mycological Society of Japan. (Contact: Toru Okuda <torula@lab.tamagawa.ac.jp>.) North American distributor: Mycotaxon Ltd., P.O. Box 264, Ithaca, NY 14851-0264, USA. <info@mycotaxon.com>. Pp. xv + 1177. Softcover ed. ISBN 978-4-87974-624-5. Price (US) $130, postpaid. Hardcover ed. ISBN 978-4-87974-625-2. Price (US) $220, postpaid. Canada and Mexico delivery add US$25 for postage.

Access to this monumental work is essential for any taxonomist who works with collections from Japan. It is indisputably the most comprehensive floristic listing that I have ever encountered. 1067 pages are, throughout, in small typeface, alphabetically listing all species by alphabetically ordered generic name, with the most current familial placement shown for each taxon. The correct names and authors are all provided with their places of publication in Roman typeface. Locations of holotypes and isotypes are noted carefully. Anamorphs where known are clearly identified, allowing quick cross-referencing. Teleomorphs are similarly cross- referenced to their anamorph names. Nomina rejicienda under the International Code of Botanical Nomenclature are clearly marked as such. Even more important, all misapplications are shown as "sensu" a Japanese author or authors, and crossed referenced to those names. All in all, a goldmine of information.

The volume weighs in at almost 4 1/2 pounds in paperback and over 5 pounds in hardcover, and may to some of us be worth its weight in gold. Though few individuals will be willing to pay the price for a personal copy, the serious taxonomists among us should do all they can to get their library to buy a copy. Borrowing a copy on interlibrary loan is scarcely the solution when time and time again you'll want to consult this.

With all its excellent features, this book has some drawbacks for the non-Japanese reader. Host names are given by Japanese common name only, and these in kanji. Common names in kanji are also applied to most accepted

species for Japan. For non-kanji readers, the two indices to Japanese names of fungi and Japanese names of hosts will prove useless. And, to my mind, the most serious fault for the non-kanji reader is that later references to each species are provided, but only non-Japanese journals have these references in Roman typeface. All Japanese journal names, except for original publication of a name, are strangely rendered only in kanji. One sees three, four, five or more kanji characters followed by, for example, 26:65, 1975., leaving the non-Japanese reader wondering which journal that is. I'm sure our Japanese colleagues will be frequently emailed to translate such journal titles into Roman characters. I have suggested to the publishers that they could add a helpful slip-in sheet with the translations of the names of Japanese journals into Roman typeface.

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Book Announcements

Atlas des Cortinaires Vol. 19. By A. Bidaud, P. Moënne-Loccoz, P. Reumaux et X. Carteret. 2010. Sarl Editions FMDS, 2436 route de Brailles, 38510 Vézeronce-Curtin, France. <esperance.bidaud@wanadoo.fr>. Loose leafed in folder. Pp. 131, pl. 64. Price around € 148.00.

Flora Slovenska Volume 10:2: *Mycota* (Huby), *Ascomycota* (Vreckatem huby). *Taphrinales: Protomycetaceae, Taphrinaceae*. 2010. Edícia Flóra Slovenska, Slovakia. <www.elegenda.sk>. Pp. 184, pl. 6, figs. ISBN: 978-80-224-1096-0. Price € 11.00.